

Information Literacy and Small Business

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White paper prepared for UNESCO, the U.S. National Commission on Libraries and Information Science, and the National Forum on Information Literacy. See recommended bibliographic citation format at the end of the paper for use when quoting from or reproducing this paper.

Abstract

Information literacy is becoming more important in business because the nature of business is changing from the self-contained business to the globally connected enterprise. Large multi-national corporations have long been involved in the global marketplace, but now many small businesses are as well. The Internet has made it possible for the smallest business to have global reach. This new global networked environment demands increased information literacy. For small businesses, lacking the resources to have information professionals on staff, it is now necessary for all employees to attain a new, higher level of information literacy.

Acknowledgement

Gary Baker, Director, Automotive Manufacturing Global Industry Group, Electronic Data Systems, Inc. contributed substantially to this paper.

1. INTRODUCTION

Conventional literacy is usually defined as the ability to read and write and is often simplistically viewed as a binary condition, either the person can read or cannot read. This belies the reality that reading ability is probably distributed according to the conventional normal distribution in the population. Some people cannot read even a traffic stop sign or a simple food label, while others can master the most arcane arguments in academic texts. Most of the population lies between these extremes. Most can read at some level. What troubles me about this binary distinction between the literate and the illiterate is that modern civilization demands more reading ability than it used to and the statistics about illiteracy too often ignore the subtle distinctions between the ability to read and the ability to read at a level appropriate to life in a modern, information-rich society.

Information Literacy, as variously defined, has the same characteristic distribution as conventional literacy. While there are those who are exceptionally information literate, knowing the appropriate sources of information in almost any field, there are those who are at the bottom of the scale and might be termed the information illiterate. Between the extremes are the vast majority of people who have some access to information and some knowledge of how to use the information in their work. The question becomes how much information literacy is necessary to function in the modern economy and how do we measure that literacy?

The need for increased information literacy is magnified for the employees of small businesses because small or medium sized businesses typically do not have the resources to compartmentalize the information gathering and use functions, nor do they have the resources to construct the infrastructure necessary to access and use the information. So the need for information literacy in small and medium sized enterprises (SME's for short) is arguably higher for most employees than in larger corporations or organizations.

The United States Government describes small businesses as those having fewer than five hundred employees. This seems somewhat arbitrary because the nature of the business is often the most important consideration. A manufacturing business might have several hundred employees in the manufacturing plant supported by a very small administrative and clerical staff. Likewise, a high-tech business might have very high sales volume with relatively few employees. For the purposes of this discussion, an arbitrary limit of fifty to one hundred employees can constitute a small business while companies with several hundred to several thousand employees can be considered medium sized enterprises. For the purpose of discussing information literacy in small business, perhaps the best indicator is whether the company can afford or does have a professional librarian on staff.

The conventional definition of information literacy is the ability to know when information is needed and then having the skill to identify, locate, evaluate, organize, and effectively use that information. In the modern business world, even for very small businesses, the needs in this regard are very complicated. It is often difficult to know when information is needed, or what information is needed. Even if the need can be ascertained, it is difficult to find the information and to use it effectively.

For example, in many cases having information can cause the business to grow, but that is not always obvious in advance. In small businesses situations arise where information

is needed quickly. Perhaps an order comes in from a country where you have never sold before. To fill the order it is essential to know the customs regulations and shipping options that must be used. Business opportunities often require marketing material to be translated into other languages. In some cultures it is important to know business and cultural mores before venturing into the market. All this requires the effective gathering and processing of information.

Large businesses have the luxury of compartmentalization. One person can concentrate on sales in a specific area or for a particular product line while someone else can concentrate on information gathering. The line personnel in a large company have staff to rely on for many things including information seeking and even information analysis. In small companies, employees often wear many hats. Each employee is responsible for many aspects of the business and the information gathering required for those aspects of the business. This can be very demanding on the employee, but for the information literate, the need to be responsible for many information related functions presents an opportunity. Employees tend to enjoy work when it is interesting and varied. But without the requisite skills in information literacy, the tasks can become impossible.

Small businesses often do not have the “silos” that exist in larger enterprises. Silos are self-contained parts of the organization that do not communicate well with the rest of the organization. In general communication is easier in a small organization, but it is also true that large organizations tend to have more formal communication systems in place. In small organizations institutional memory and valuable information are often lost when an employee leaves. Larger organizations have systems in place to make the loss of an employee less problematic. In general, it is easier to share information in small or in virtual companies. Virtual companies are those that outsource much of their activity and depend on partnerships with outside organizations. The virtual company has a small staff and lets other organizations perform many vital functions like accounting, human resources, sales, etc. A virtual company can also outsource many information gathering functions.

Smaller businesses share information more effectively than larger organizations. They share information within the organization and with outside partners. They share the information informally and formally, often using the Internet to facilitate the exchange. Small businesses tend to have less experienced employees who may be computer literate, but not information literate. It takes some time to learn the information infrastructure of a business or a business sector. If the employee of the small business has very little or no work experience at hire, it takes time and resources to train him or her to be an effective, information literate employee. One of the greatest problems of the Internet generation is that they assume that the entire world of knowledge resides on the Internet and that anything over seven years old (B.I., before the Internet) is inconsequential. As a result, there is a significant problem in the evaluation of information that the business uses. The younger, inexperienced employees often lack the judgment needed to evaluate information.

Perhaps one of the most important characteristics of small businesses is the immediacy of their needs. Large businesses have sufficient inertia to lumber through business cycles. The revenue of a large business is cushioned by the diversification of their product line. If one sector is down, another might be up. Small businesses rarely have the luxury of

waiting. Their needs are immediate. Sales are more important than marketing. This is also true of the information needs of small businesses. The information needs are immediate. There is no time to explore options or to plan.

2. INFORMATION LITERACY AND E-COMMERCE

E-Commerce has been the name applied to conducting business on the Internet. The term suggests that it is mostly about buying and selling products, whether to individuals or to businesses, by using the Internet. In fact, e-commerce, or e-business as I prefer to call it, is about much more than commerce. It is doing business in a global, networked environment, and this is the environment that most businesses, large and small, are now finding themselves in. The global, networked environment allows, perhaps often forces, even the smallest business to participate in the global marketplace. We see rug weavers in far off lands making their wares available on the Internet for the entire world to see. Even the smallest businesses producing a product now sell into a global market and can offer their parts to anyone in the world

For buyers, the world is a new marketplace. It is possible to find the lowest cost product with new ease. In the past the purchasing agent certainly had to be information literate. He or she had to know how to find information on sources of product. This was most often done by having shelves full of product catalogs and price lists from various manufacturers and producers. Keeping these up to date was a full time job. When the time came to order, the product listings and the prices were often out of date. All this is now moving online, so that the purchasing agent has the necessary information resources easily at hand.

The profound change that the Internet has made in how business is done has been somewhat obscured by the boom and bust of the Internet businesses. The boom overestimated the value of the new technology and the bust underestimates the importance of it. A special issue of the Economist in 1999 tried to ascertain the impact of the new technologies and even in the midst of the boom they articulated a new vision:

Ultimately the Internet will change our ideas not just about how businesses behave, but about what they actually are. The search for a new name is already on. Varda Lief of Forrester Research calls it "dynamic trade", which she defines as "the ability to satisfy current demand with customised response." Tom Siebel, the founder of Siebel Systems, a business software firm, talks about the "para-enterprise"; Gajen Kandiah of Cambridge Technology Partners describes it as "the new business ecosystem."

The Internet strategy of most fairly go-ahead big companies has been quite straightforward: to establish a new and potentially very efficient distribution channel. But the companies will soon discover, if they have not done so already, that something more profound than taking orders online is possible. According to Ms. Lief, the new way of doing business will differ from the old in a number of vital respects.

For example, services will increasingly become more important than mere products. Web pages will deliver customised services, such as help for consumers in making their choice, or stock management for business partners; organisations will collaborate as and when needed to provide instant one-stop shopping. Demand will drive production via the extended value chain. Increasingly, fixed prices will give way to prices that reflect market conditions and treat different kinds of customers differently. An airline ticket, for example, will soon be as much an entree for selling related services such as hotel bookings, car rentals and travel insurance as the right to a seat on a plane. The airline has no need to own any of the other service-providers: it simply brings them together under its brand umbrella to provide a convenient package for the customer.¹

This view of the Internet and how it will change business is profound. It suggests that we now must look at businesses not as self-contained entities, but as part of a broader ‘ecosystem’ of commerce. Many of the most successful businesses of the last decade have understood the consequences of this approach. Wal-Mart and Cisco are two large businesses that have become successful by using information systems to transform their businesses and make them among the most productive companies in their industries. Today any business exists in a network of suppliers, employees, customers, and other constituencies. All can be connected to each other via the Internet. Businesses will work together in new ways. For example, there is no need for airlines to own hotel chains or car rental companies but they can all work together to sell products to the same customer at the same time.

The information technology embodied in the Internet is even more important for small businesses, because it confers on them advantages that were only available to large businesses a few short years ago. In many cases the small businesses have an advantage because they can be more nimble in reacting to the changes inherent in the new technology. For example, large companies could maintain their product catalogs online, but after the Internet and associated technologies were developed small companies could do exactly the same thing.

Like any new technology the Internet has had a long evolution. The notion of using computers to help run a business existed well before the Internet, and those companies that took advantage of the hardware and software available were able to make businesses function more efficiently and were also able to keep better track of their finances. The “revolutionary” aspect of e-business lies in the global reach of the automation. Before the Internet, most business computing was self-contained in the organization. Links outside the company were relatively rare. This has all changed.

3. E-COMMERCE AND THE SUPPLY CHAIN

Most manufacturing businesses are in a supply chain that includes the companies that supply it and also customers that buy and use the manufactured products. The Internet has radically transformed this manufacturing chain. Most aspects of the supply chain can

¹ Business and the Internet Survey, *The Economist*, June 26, 1999, p.17.

now be accomplished online. Information literacy is a requirement to be competitive in this environment. It is one thing to say that all the information needed for effective purchasing decisions is online, but quite another to find it. Searching for relevant purchasing information is just as difficult as any other search and it requires a high order of information literacy. In many cases information is becoming the lifeblood of the business.

Small businesses are usually able to forge alliances more quickly than their larger brethren. While it is not always true, the small business is more centralized and the decision-making is also more centralized. Large companies lumber through the decision process and find it difficult to forge fluid alliances to mutual advantage. Since the decisions must be made quickly, the information gathering that is necessary for the decision also has to be done more quickly.

Many larger companies and the Federal Government have mandated that their suppliers use the Internet or other software to process purchase orders and control inventory. The entire “just in time” inventory control system is based on a close linkage between supplier and customer. These mandates have forced small manufacturing companies to become involved in the Internet whether they wanted to or not. The mandate has also forced employees of the companies to become sophisticated users of computer and information systems and to become “information literate.” This process has a long way to go, but just by bringing companies into the Internet, a certain sophistication with information is achieved.

Many traditional businesses have shifted much of their activity to the Internet. For example, airlines are selling an increasing volume of tickets online. Hotel and car rentals are reserved online. The Internet is giving the smaller businesses global reach. The Internet is making it possible for smaller hotels to have the same reach as the larger chains, at least in the opportunity to place their properties on a Web site, where customers can evaluate the product and make reservations. At the dawn of the Internet, the playing field was more equal and all hotels had similar access to the Web, but as the Internet matures the aggregation of business to certain sites makes it again more difficult for smaller players to get business. This is because the aggregators, Expedia or Travelocity, make it possible for the traveler to see many hotel properties in one place and compare them on the basis of features or price. These Web companies deal more easily with the large corporations, and favor the larger chain hotels and major carriers. So once again, the small business is at a disadvantage. But to be completely off the Internet puts the business at an even greater disadvantage.

4. NEW INTERNET BUSINESSES

Perhaps most interesting are a host of new businesses that simply would not have been possible without the new Internet technology. The instant communication provided by the Internet enabled these businesses. Some of the new businesses have crashed and burned in the demise of the Internet bubble, but many others survive and will live to see another day. Internet spawned businesses include the marketplace exchanges for many types of raw materials. These exchanges have been both internal and external. The major exchanges, like VerticalNet, have become victims of the Internet bust, because

they assumed that price was the only issue affecting purchasing. It proved to be more complicated than that. Yet they leave a legacy of important exchange technology that is being used both inside and outside major corporations.

New businesses also include comparison-shopping sites, gambling sites, pornography sites, and most notably Internet auction sites. eBay has shown how powerful the Internet auction can be. Some writers have observed that as prices are increasingly determined by auction, the “friction” in the economy is removed and with it much of the profit in doing business. Yet, auctions are starting to become fairly successful in the Internet marketplace. Of course, there have been many brokerages before the Internet, but the new technologies make it easier.

The genius of eBay and similar businesses is not just the creation of a global flea market. The genius is that they were able to create a business without inventory or product. The buyers and sellers assume all the economic risk and the expense of housing and then shipping the product. The business of the company is entirely “electronic” and the only things that eBay itself moves are electrons, and “selling electrons” can be enormously profitable. Software companies and other Internet ventures are in similar situations. These new Internet business models are in every sense of the word “information” businesses. Perhaps it goes without saying that information businesses live and die by having the appropriate information. Information literacy in these businesses takes on a heightened importance.

The Internet auctions have had another effect. They have created vast numbers of new small businesses and have augmented many others. Many vendors with thousands of transactions are really small businesses that use eBay as their primary sales channel. Some of these businesses, as evidenced by the large numbers of transactions, are fairly substantial. Perhaps the entrepreneurs starting these businesses need more computer literacy than information literacy, but clearly these are primarily information businesses and developing sophistication in using information is the key to success.

5. INFORMATION LITERACY IN THE NEW ECONOMY

Information literacy is seen by some to be tightly bound to libraries and their patrons, but in the context of small businesses information literacy takes on a much broader meaning. The skills needed to find the best price for raw materials used in manufacturing are often the same skills needed to do research on a new scientific discovery. Information literacy is not to be confused with computer literacy although it bears a close affinity since so much reference information is now available on the Internet using the computer. Certainly, employees of small businesses need to be somewhat computer literate, but sophisticated computer literacy can be confined to those who support the computing function of the organization. Information literacy on the other hand must be part of the skill set of almost every employee who works with information in a small business.

This new environment where businesses now find themselves require employees who are information literate. There is simply no way around this. Businesses now even need employees who are information literate in several languages. More and more businesses are developing Web sites in several languages. The employee of the new global small

businesses must understand the value of information and must be able to acquire and use the information.

Once an enterprise becomes global there is a need for more sophisticated information resources. When orders come in from faraway places, it is important to be able to respond to the customer in an appropriate manner and in the appropriate language. Before long a business will have to find an agent in the country that is targeted, and this requires research and expertise that can be defined as information literacy. We still live in a world of cultures and a myriad of rules, laws and taxes, etc. This requires information.

If information literacy is distributed normally in the population we will have individuals who populate each end of the spectrum. The proliferation of information (often unreliable information) on the Internet has made it necessary in many situations to have sophisticated personnel able to effectively evaluate information resources. The small business needs “gate keepers” who can filter the information coming into the company. Once again, in larger companies a librarian or a trained information specialist can do this function. In the small company the job falls to the employees with line functions.

6. BUSINESS RESOURCES

I have made the argument that the information needs of small businesses require a broad definition of information literacy. Small businesses also have a clear need for conventional sources of business information. By this I mean the need to know about conventional sources of business information. Again, larger companies can afford to have corporate libraries with expert librarians to provide a full range of needed information for the company. A small company with no library needs information literate employees who can find and assemble the information necessary to conduct and grow the business. In small businesses without formal systems the employees do not share information as effectively.

Before the Internet, business information resources were available in business libraries, often located at universities. As library automation grew, bibliographic databases became increasingly available online. But online in the days before the Internet meant using a computer terminal to access remote databases, usually at relatively high cost. The cost of the technology and the cost of the information made much of the business information unavailable to the smaller enterprises. To address this problem of access to business information a myriad of organizations, both for-profit and nonprofit, were created to provide businesses with information. These include university libraries which sometimes have remote document delivery and reference services to serve local businesses, government agencies like the U.S. Small Business Administration that makes a great deal of information available, and companies that provide information consulting and document delivery services to small businesses. The growth of the Internet and the participation of business libraries in using the Internet to deliver information have made the job of information gathering in small businesses much easier. Yet, much valuable information is still not available on the Internet and so libraries are an important component of the business information support that small businesses need to stay competitive.

To deal with such a wide range of information resources the small business either needs a well-trained librarian or employees who are information literate and able to get the information resources they require. Since most small or even medium sized businesses do not have a librarian, it falls to the employees to become information literate to a relatively sophisticated degree, even knowing when going to a business library can be useful.

In a 1996 article, Mutch² argues that information literacy and general management are not connected enough in most businesses and that the education of future executives perpetuates this situation. He finds that what does pass for information literacy education is really the teaching of information technology skills and not how to effectively retrieve and use information. Clearly, information technology and information literacy should be a larger part of the business school curriculum, and perhaps as the Internet gains importance in business, courses will appear that teach students how to use information effectively.

The role of information resources in business has been much debated. Some feel that business is done as an opportunistic reaction to market forces, while others feel that strategic planning and a disciplined adherence to the plan is essential for the successful conduct of business. Often small businesses would like to plan, but do not have the luxury of resources that can be used for long term strategic planning. But the best avenue is to use available information to gain strategic advantage, and this should be a focus of the curricula of most business schools.

Central to the concept of information literacy is the knowledge and understanding of information sources. At the top of the scale is the reference librarian who has a thorough grasp of the various sources available in an area of study, in this case business information sources. The best reference librarians have this grasp of sources for virtually all areas of interest. Small businesses rarely have a skilled librarian on staff. In small businesses many employees must develop a set of important resources and know where to find them. This becomes part of the employee's job. In technology businesses, the product development staff must be able to find the necessary scientific information, the marketing people must be able to locate potential customers, the customer support staff must be able to get at internal information about the products of the company and must also be able to get information on competing products. Often the support people must know how their company's technology works with other technologies and this requires access to information. The dissemination of valuable resources has become easier. People share resources via email with links to Web sites. In small businesses information is more often shared in this way than with formal links to libraries.

Christine Susan Bruce suggests that there are various aspects to information literacy and concludes that, "Information literacy is about people's ability to operate effectively in an information society. This involves critical thinking, an awareness of personal and professional ethics, information evaluation, conceptualizing information needs, organizing information, interacting with information professionals, and making effective

² Mutch, A. 1996. Information Management: A Challenge For Business Education. *International Journal of Information Management*, Vol. 16, No.6, pp: 445-455.

use of information in problem solving, decision making, and research.”³ To this I would add that in a small or medium sized business this falls to many employees, not only those charged with information literacy functions.

7. SUMMARY

In many ways the concept of information literacy in business is not new. Just the term and its definition are new. Successful businesspeople have long known that having certain types of information conveys a significant strategic advantage to a company. Also new is the importance of information literacy in the new global marketplace. Information literacy was always important to businesses, but now it takes on a new importance because of the changes wrought by the new network technologies. When businesses are connected to each other, information becomes especially valuable.

Many small businesses have become global in reach and this new, networked environment requires employees to have significant skills that fall within the definition of information literacy. Even very local businesses have to compete with other local businesses and the one with the most information literate employees will have a clear advantage. That advantage can be as simple as being able to obtain supplies at lower prices or as complex as knowing newer, more efficient processes that can make the business more successful.

Small businesses will grow and thrive if they can get and keep information literate employees. They will expand in response to the new information technology environment, and use information to facilitate this growth. Small businesses can develop strategic alliances with other businesses and this requires information. They must also develop internal systems for gathering and distributing the information. The small business has the advantage of being nimble and quick to act, but it also often has the disadvantage of not having systems in place to effectively secure and use the information that its employees gather.

How much information literacy is enough for a small business? This all depends on the industry, the kind of business, and the location of the customer base. But one thing is clear. Most small businesses that want to grow and prosper must take advantage of the new global, networked business environment, and when they do they will need increasingly sophisticated, information-literate employees. To thrive, small businesses must make an especially strong effort to train all of their information-using employees to become information literate.

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³ Bruce, Christine Susan. 1999. Workplace Experiences of Information Literacy. *International Journal of Information Management*, Vol. 19, no. 1, pp. 33-47.

Suggested Bibliographic Citation:

Victor Rosenberg, "Information Literacy and Small Business," July 2002, White Paper prepared for UNESCO, the U.S. National Commission on Libraries and Information Science, and the National Forum on Information Literacy, for use at the Information Literacy Meeting of Experts, Prague, The Czech Republic.

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